

REMARKS

The present amendment is prepared in accordance with the new revised requirements of 37 C.F.R. § 1.121. A complete listing of all the claims in the application is shown above showing the status of each claim. For current amendments, inserted material is underlined and deleted material has a line therethrough.

Applicants appreciate the thoroughness with which the Examiner has examined the above-identified application. Reconsideration is requested in view of the amendments above and the remarks below.

Applicants note that the Request for Continued Examination under 37 CFR 1.114 has been granted. The Examiner states that claims 28-30 and 32-34 are canceled, claims 1, 3-10, 12-18, 20-24, and 27-28 are pending and claims 5, 7-10, 12-15, 17-18, 20-23 and 27 remain withdrawn.

The Examiner has noted in the present Office Action that the Amendment filed on November 21, 2003 amending all the claims drawn to the elected invention to read only on a non-elected invention is not responsive under MPEP ¶ 821.03. The Examiner relates back to Paper No. 6 wherein the Applicants stated only generic claim 6 and generic claims 1, 16 and 24 to read on the elected species of Fig. 2B. The Examiner however, deemed claims 2-4 to also read on the elected species. In the amendment filed on the November 18, 2002, the Examiner evidently unknowingly permitted Applicants to shift the invention from the species of Fig. 2B to the species of Fig. 3B, not included the original election requirement. The shift of the invention from the species of Fig. 3B to Fig. 4B will not be permitted.

Applicants respectfully submit that the original restriction requirement was proper in that five (5) groups were defined, with each group defining a particular corrugated shape.

In the original Restriction Requirement Office Action mailed March 8, 2002, the Examiner restricted the invention to Groups I-V to define a patentably distinct species of the claimed invention as the species illustrated in Figs. 2A-2E, respectively. Applicants elected the species illustrated in Fig. 2B.

During prosecution of the application, Applicants amended the main claim 1 to claim a single-faced flexible corrugated strip article. The shape of the corrugated tape strip was that as in elected claim 6, which is the shape shown in Fig. 2B. The amended single-faced flexible corrugated tape strip article is shown in Fig. 3B. The Examiner as noted above unknowingly permitted Applicants to "shift the invention from the species of Fig. 2B to the species of Fig. 3B".

In Applicants' specification there are a number of corresponding figures showing the same shape corrugation with the added limitations of a metal strip on one or both sides of the corrugation. In particular, Figs. 2A-2E, Figs. 3A-3E and Figs. 4A-4E. In all these figures, there is a corresponding shape to the corrugated article in the corresponding figure. Thus, Fig. 2B shows the elected corrugated shaped strip, Fig. 3B shows a single-faced article with the same shape corrugation and Fig. 4B shows a double-faced article with the same Fig. 2B shape corrugation. Applicants understood the restriction requirement to be based on the shape of the corrugated strip and not that the strips including a single-faced or a double-faced article are in different groups. Accordingly, during prosecution Applicants amended the claims from a corrugated strip of Fig. 2B to the

same corrugated strip with a facing as in Fig. 3B and Fig. 4B. This amendment was allowed although now indicated to be improper.

It is now the Examiner's position that Applicants have again shifted the invention from the species of Fig. 3B to the species of Fig. 4B and that this will not be permitted. Applicants respectfully submit that this is not a shift of species. The Examiner is now contending that the original restriction requirement should have included fifteen (15) groups indicating each of the shapes and each of the articles containing such a shape, to wit, no facing (only corrugation), a single-faced article and a double-faced article. This position is respectfully submitted to be unwarranted because each shape is respectfully considered to be a species (Figs. 2A-2E) and the articles of Figs. 3A-3E and Figs. 4A-4E are the same species with added limitations (single-faced or double-faced). Thus, Applicants respectfully submit that the original restriction requirement was proper in requiring five (5) groups and that Figs. 3 and Figs. 4 should be included in the species of each of those groups.

To comply with the Examiner's requirement for the Amendment to be responsive however, Applicants have added new claim 35 which includes a claim reading on the "elected" species of Fig. 3B.

Reconsideration of the Examiner's rejection is respectfully solicited.

Also, the Examiner notes that the Amendment does not comply with the requirements of 37 CFR 1.121(c) because the amendment does not show the withdrawn claims in their entirety. The entire claim must be shown and labeled as "(withdrawn)". Applicants have amended the claims and it is respectfully submitted that the requirements of 37 CFR 1.121(c) have now been met.

Applicants are restating here for convenience of the Examiner the arguments presented in the November 18, 2003 Amendment for patentability of the claims directed to Fig. 4B.

Claims 1, 3-4, 6, 16, and 24 have been rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. The Examiner contends that the claims contain subject matter which is not described in the specification in such a way that they reasonably convey to one skilled in the relevant art that the inventors at the time the application was filed had possession of the claimed invention. Specifically, the Examiner contends that the specification lacks an adequate written description of the invention since there is no support for a "flexible corrugated tape strip" in combination with a "flat flexible tape strip". There is only support for a "tape strip article" which may be a "single or double faced corrugated tape strip".

Firstly, Applicants have amended the claims to claim a double-faced flexible corrugated tape strip article. Such an article is made by providing a flexible corrugated tape strip of a thermal conductor material having a flat flexible tape strip of the thermal conductor material bonded to each side thereto. Support for the amendments may be found, for example, on page 4, the paragraphs beginning at lines 9 and 14. Also, such a tape article is shown in Fig. 4B. Accordingly, it is respectfully submitted that there is support in the specification for such an article and method of using the article.

Claim 3 has been rejected under 35 USC 112, second paragraph, because there is insufficient antecedent basis for the limitation "the tape strip" in line 1. The Examiner contends that it is not clear which "tape strip" is being referenced, i.e., the corrugated or flat tape strip.

Both "tape strips" are being referenced and claim 3 has been amended accordingly. Support for the amendment may be found in the specification, for example, on page 12, the paragraph beginning at line 27.

Claims 1, 3-4, 6, 16 and 24 have been rejected under 35 USC 102(b) as being anticipated by Trunk (Fig. 2), U.S. Patent No. 3,261,396. Regarding claim 4, as permissibly gleaned from Fig. 2, the thickness of corrugated strip 24 and flat strip 14 are at most 2.5 times the thickness of anodized coating 32 of 1 mil.

Trunk relates to heat dissipaters for electronic circuitry. While Trunk does show corrugated sheet metal used to form the heat dissipater, it is clear that the corrugated sheet metal does not have a flat strip on each side of the corrugated strip as now claimed by Applicants. Applicants' article is a double-faced article comprising a corrugated strip and a strip bonded to each side of the corrugated strip. Trunk does not show such an article and does not therefore anticipate nor teach Applicants' invention.

Claims 1, 3, 16 and 24 have been rejected under 35 USC 102(b) as being anticipated by Haushalter, U.S. Patent No. 4,926,935. The Examiner cites Fig. 1, col. 1, lines 12-26 and states that the base plate of Haushalter is believed to be flexible.

Haushalter is cited to show a length of corrugated compressed fin forming a continuous top flat surface and a continuous bottom flat surface. Haushalter does disclose that the heat sink currently requires a base plate between a length of corrugated fin and the element to be temperature controlled. The Examiner relies on the use of a base plate with a corrugated fin to show Applicants' invention.

Applicants' claims have been amended to claim a double-faced flexible corrugated tape strip article used for heat dissipation. Haushalter does not show such a double-faced

article and it is respectfully submitted that the claims are properly allowable over this reference.

Claims 1, 3-4, 6, 16 and 24 have been rejected under 35 USC 102(b) as being anticipated by August (Fig. 3), U.S. Patent No. 5,829,512. Regarding claim 4, as permissibly gleaned from Fig. 3, the thickness of corrugated strip 10 and flat strip 25 are substantially the same thickness of 1 to 10 mil.

August shows a heat sink for dissipating heat from electronic components and the heat sink is formed from metal foil comprising a series of co-planar base portions interposed with transverse fins. A base layer comprising an additional strip of sheet metal material has adhesive on both sides and is affixed to the base portions of the folded foil on one side and the surface of the electronic component on the other side.

It is clear that August does not disclose nor teach Applicants' invention which is directed to a double-faced flexible corrugated tape strip article. There is no disclosure in August to use a strip of sheet metal material on both sides of the fins. Accordingly, it is respectfully submitted that the claims are properly allowable over August.

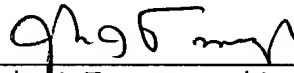
Claims 1, 16 and 24 have been rejected under 35 USC 102(e) as being clearly anticipated by McCullough U.S. Patent No. 6,367,541.

McCullough is directed to a conforming heat sink assembly for removing heat from integrated circuit devices. It is clear that a double-faced flexible corrugated tape strip article is not shown and it is respectfully submitted that the amended claims are properly allowable over McCullough. McCullough only shows the fins attached to the top surface of flexible base member 104. There is no disclosure of the other side of the fins likewise having a flexible member attached thereto as now claimed in Applicants' invention.

Applicants note the rejection in view of Takahashi is withdrawn, since only the thickness of the corrugated strip is disclosed without respect to a flat strip.

It is respectfully submitted that the application has now been brought into a condition where allowance of the case is proper. Reconsideration and issuance of a Notice of Allowance are respectfully solicited. Should the Examiner not find the claims to be allowable, Applicants' attorney respectfully requests that the Examiner call the undersigned to clarify any issue and/or to place the case in condition for allowance.

Respectfully submitted,



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